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Docket No. F-8524

Ser. No. 10/519,730

REMARKS

Claims 1-6 and 8-22 are now pending in this application. Claims 1-14 are rejected. Claim 7 is cancelled. New claims 15-22 are added. Claims 1-14 are amended herein to express the invention in alternative wording which does not narrow the claims scope but instead broadens language as deemed appropriate and addresses matters of form unrelated to substantive patentability issues. Other formal matters are attended to that were not addressed by the Examiner and accordingly are considered unrelated to substantive patentability issues. For the convenience of the Examiner, APPENDIX I is provided herewith having a complete set of pending claims with all amendments effected therein.

INFORMATION DISCLOSURE STATEMENT

The Examiner alleges that a copy of the reference DE3702416 was omitted from the prior filings. Although this reference should have been forwarded by the International Search Authority, applicant provides herewith a copy of the reference and the search report citing the reference wherein the degree of relevance is indicated. An Information Disclosure Citation List is provided. The presently applied Au-Yeung US reference is the equivalent of the EP 0 276 582 reference alleged to be missing in the Office Action.

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PARAGRAPH FOR SUBSTITUTE SPECIFICATION AND ABSTRACT

Applicant submits herewith a substitute specification and abstract wherein amendments are effected to place the text thereof into proper English in accordance with 37 CFR 1.125(c). Also accompanying this amendment is a reproduction of the original specification and abstract with markings indicating the present amendments and those of the Preliminary Amendment effected in the substitute specification in accordance with MPEP §608.01(q) and 37 CFR 1.125(b). No new matter is added. Entry of the substitute specification and abstract is respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §101

The Office Action indicates that the claims are rejected as being inoperative and therefore lacking utility. The Office Action states:

The limitation/s of claims 1 and 6 where "each opening can be connected through over the straight interconnection or over one of the curved paths to each of the other three openings" does not appear operative by Applicant's structure as illustrated by Au-Yeung, thus lacks utility.

Applicant's device comprises the same structural connections as illustrated by Figs. 1A-1D of Au-Yeung. When the straight interconnection (14) is connected to opposing ports 1 and 3 (Fig. 1B), curved paths (16) and (18) are not connected to the other two openings identified as ports 2 and 4. Similarly, when the curved paths (16 or 18) connects only the respective opposing port opening and said curved path does not connect to the other two ports, thus claims

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1 --14 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility.

As best understood, it appears the above recited rejection is rejecting the claims based upon a claim interpretation that each opening is simultaneously connected to each of the other three openings. However, the claim language presented explicitly included the qualifier "depending on the rotational position" which clearly indicates that such connections are not being claimed as simultaneous but are position dependent. Indeed, nowhere in the claims is it indicated that the connections occur at the same time as would appear to be implicit in the rejections of the Office Action.

In order to facilitate claim interpretation, a different wording has now been presented in claims 1 and 6 wherein it is stated that:

the end openings are selectably connectable to said connection openings by rotating said rotor to respective ones of said rotational positions whereat the straight interconnection interconnects opposing ones of said connection openings or the curved paths respectively interconnect pairs of adjacent ones of said connection openings[.]

It is respectfully submitted that the above wording eliminates any interpretation that the claims mean the invention makes simultaneous connection of one port with three other ports or that both the straight interconnection and the curved paths can somehow make all three connections. Indeed, the claim is broadened to the extent that the curved paths each need only be positionable to connect a pair of adjacent openings and not necessarily more than one pair.

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In view of the above noted claim revisions broadening and clarifying the claimed switch operation, applicant respectfully submits that the claimed structure is operational and provides utility. Reconsideration of the rejections is respectfully requested.

**CLAIM REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH,
DESCRIPTION REQUIREMENT**

Claims 1-14 are rejected under 35 U.S.C. § 112, first paragraph, for lacking an adequate written description of the invention as recited in claims 1-14 are likewise rejected. Applicant herein respectfully traverses this objection and rejection.

As noted above, it is not entirely clear how the Examiner is interpreting the claim language to arrive at the present rejections. However, the substance of the claim language of originally filed claim 1 is now incorporated into the summary section of the specification. Therefore, any material therein which the Examiner does not believe is found in the specification is now explicitly in the specification. No new matter is added since the claim language used is based on the originally filed claims.

Therefore, in view of the above, reconsideration of the rejections of claims 1-14 are respectfully requested. Should such rejections be maintained, it is requested that the Examiner explain the grounds for the rejections, addressing the above remarks, to comply with satisfying the burden of the PTO in asserting the rejection.

"The burden of showing that the claimed invention is *not* described in the application

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rests on the PTO in the first instance, and it is up to the PTO to give reasons why a description not in *ipsis verbis* is insufficient." *In re Edwards, Rice, and Soulen*, 196 U.S.P.Q. 465, 469 (CCPA 1978) citing: *In re Salem*, 553 F.2d 676, 682, 193 USPQ 513, 518 (CCPA 1977); *In re Wertheim*, 541 F.2d at 265, 191 USPQ at 98.

**CLAIM REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH,
ENABLEMENT REQUIREMENT**

Claims 1-14 are rejected under 35 U.S.C. § 112, first paragraph, as not being enabled by the specification. Applicant respectfully submits that the claims are properly enabled for reasons discussed above with reference to the rejections under the description requirement and in light of the apparent understanding of R switch operation in the art as demonstrated by the Examiner's reference to the Au-Yeung reference. Therefore, reconsideration of the rejection and allowance of the claims are earnestly solicited.

REQUEST FOR EXTENSION OF TIME

Applicant respectfully requests a one month extension of time for responding to the Office Action. Please charge the fee of \$120.00 for the extension of time to Deposit Account No. 10-1250.

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CLAIM FEES

One claims in excess of twenty are added. Accordingly, please charge the fee of \$50 to Deposit Account No. 10-1250.

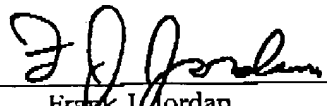
If there is any discrepancy between the fee(s) due and the fee payment authorized in the Credit Card Payment Form PTO-2038 or the Form PTO-2038 is missing or fee payment via the Form PTO-2038 cannot be processed, the USPTO is hereby authorized to charge any fee(s) or fee(s) deficiency or credit any excess payment to Deposit Account No. 10-1250.

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In light of the foregoing, the application is now believed to be in proper form
for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,
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APPENDIX I

ALL PENDING CLAIMS WITH AMENDMENTS EFFECTED THEREIN

1. (Currently Amended) An R switch for switching connections between microwave waveguides on and off comprising:

a stator having four side surfaces of which each have a connection opening for connecting to one of said a microwave waveguides,

a rotor rotatably disposed in an interior of said stator with an axis of rotation coaxial with an axis of the stator and which has a centrally disposed straight interconnection and two curved paths on either side of the straight interconnection and which is rotatable to rotational positions effecting interconnections of said connection openings,

the straight interconnection and curved paths having end openings disposed in such a manner that the end openings are selectably connectable to said connection openings by rotating said rotor to respective ones of said rotational positions whereat the straight interconnection interconnects opposing ones of said connection openings or the curved paths respectively interconnect pairs of adjacent ones of said connection openings,

the straight interconnection being constructed as a step transformer,

the straight interconnection extending in a longitudinal direction between said end openings, and

the step transformer of the straight interconnection being formed by opposing steps, and said steps defining recesses extending in said longitudinal direction and bar shaped.

2. (Currently Amended) The R switch of claim 1, wherein the step transformer of the straight interconnection is constructed multi-stepped and the

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recesses are incorporated on either side of a last step of the steps in the step transformer.

3. (Currently Amended) The R switch of claim 1, wherein the step transformer of the straight interconnection is constructed multi-stepped and recesses are incorporated on either side of all the steps in the step transformer.

4. (Currently Amended) The R switch of claim 1, wherein the step transformer of the straight interconnection is constructed multi-stepped and the recesses are incorporated on one side of a last step of the steps in the step transformer.

5. (Currently Amended) The R switch of claim 1, wherein the step transformer of the straight interconnection is constructed multi-stepped and recesses are incorporated on one side of all the steps in the step transformer.

6. (Currently Amended) An R switch for switching connections between microwave waveguides on and off comprising:

a stator having four side surfaces each of which have a connection opening for connecting to one of said microwave waveguides,

a rotor rotatably disposed in an interior of said stator with an axis of rotation coaxial with an axis of the stator and which has a centrally disposed straight interconnection and two curved paths on either side of the straight interconnection and which is rotatable to rotational positions effecting interconnections of said connection openings,

the straight interconnection and curved paths having end openings disposed in such a manner that the end openings are selectably connectable to said connection openings by rotating said rotor to respective ones of said rotational positions whereat

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the straight interconnection interconnects opposing ones of said connection openings or the curved paths respectively interconnect pairs of adjacent ones of said connection openings,

the straight interconnection and the curved paths each being constructed as step transformers, and extending in a longitudinal direction between said end openings, and

the step transformer of the straight interconnection being constructed multi-stepped and a last step in the step transformer defining recesses on either side of the last step extending in said longitudinal direction.

7. (Canceled)

8. (Currently Amended) The R switch of claim 6, wherein the step transformer of the straight interconnection is constructed multi-stepped and the recesses are incorporated on either side of all the steps in the step transformer of the straight interconnection.

9. (Currently Amended) The R switch of claim 6, wherein the step transformers of the curved paths are constructed multi-stepped and recesses are incorporated on either side of a last step in the step transformers of the curved paths.

10. (Currently Amended) The R switch of claim 6, wherein the step transformers of the curved paths are constructed multi-stepped and recesses are incorporated on either side of all steps in the step transformers of the curved paths.

11. (Currently Amended) The R switch of claim 6, wherein the step transformer of the straight interconnection is constructed multi-stepped and the

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recesses are incorporated on one side of a last step of the steps in the step transformer of the straight interconnection.

12. (Currently Amended) The R switch of claim 6, wherein the step transformer of the straight interconnection is constructed multi-stepped and the recesses are incorporated on one side of all the steps in the step transformer of the straight interconnection.

13. (Currently Amended) The R switch of claim 6, wherein the step transformers of the curved paths are constructed multi-stepped and recesses are incorporated on one side of a last step in the step transformers of the curved paths.

14. (Currently Amended) The R switch of claim 6, wherein the step transformers of the curved paths are constructed multi-stepped and recesses are incorporated on one side of all steps in the step transformers of the curved paths.

15. (New) An R switch for switching connections between microwave waveguides, comprising:

a stator having an interior cavity and four connection openings communicating with said interior cavity, each of said connection openings being respectively disposed on one of four side surfaces of said stator, said side surfaces being arranged in opposing pairs, said connection openings being configured to connect to the microwave waveguides;

a rotor rotatably disposed in the interior cavity;

said rotor having a centrally disposed straight interconnection configured to interconnect opposing ones of said connection openings when said rotor is positioned at a first rotation position;

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said rotor having first and second curved interconnections respectively disposed on opposing sides of the straight interconnection, said first curved path being configured to interconnect first and second connection openings of said connection openings which are disposed on adjacent ones of said four side surfaces when said rotor is positioned at a second rotation position different than said first rotation position, said second curved interconnection being configured to interconnect third and fourth connection openings of said connection openings which are disposed on other adjacent ones of said four side surfaces when said rotor is positioned at said second rotation position;

the straight interconnection being constructed as a step transformer,

the straight interconnection having end openings, first and second opposing walls, and second and third opposing walls, and extending in a longitudinal direction between said end openings, and

the step transformer of the straight interconnection being formed by opposing first and second steps on said first and second walls, and said first and second steps defining recess spaces between longitudinally extending step sides of said first and second steps and at least one of said third and fourth walls opposing said longitudinally extending sides.

16. (New) The R switch of claim 15, wherein said first and second steps respectively have first step ends and second step ends and said recess spaces extend from said first step ends to said second step ends.

17. (New) The R switch of claim 16, wherein the step transformer of the straight interconnection is constructed multi-stepped and the first and second steps are innermost steps of said step transformer.

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18. (New) The R switch of claim 17, wherein the step transformer of the straight interconnection is constructed multi-stepped and said recess spaces are defined by all steps in the step transformer including said first and second steps.

19. (New) The R switch of claim 17, wherein steps of the step transformer of the straight interconnection other than said first and second steps do not define said recess spaces.

20. (New) The R switch of claim 19, wherein said longitudinally extending step sides include sides on both longitudinal sides of each of all said steps and said recess spaces are defined between said longitudinally extending step sides and both of said third and fourth walls opposing respective ones of said longitudinally extending sides.

21. (New) The R switch of claim 17, wherein said longitudinally extending step sides include sides on both opposing longitudinal sides of said first and second steps and said recess spaces are defined between said longitudinally extending step sides on both said sides and both of said third and fourth walls opposing respective ones of said longitudinally extending sides.

22. (New) The R switch of claim 16, wherein said longitudinally extending step sides include sides on both longitudinal sides of said first and second steps and said recess spaces are defined between said longitudinally extending step sides on both said sides and both of said third and fourth walls opposing respective ones of said longitudinally extending sides.